SEPA

Potential Hazardous Waste Site

Preliminary Assessment

for

WELLMAN DYNAMICS CORPORATION Highway #34 East Creston, Iowa

On-Site Inspection and Assessment
Performed by Ken Lawver
Environmental Protection Agency
Emergency Response Branch, Region VII

December 13, 1983

429037



RCRA RECORDS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



25 FUNSTON ROAD KANSAS CITY, KANSAS 66115

February 2, 1984

MEMORANDUM

SUBJECT:

Transmittal, Preliminary Assessment for Wellman Dynamics,

Creston, Iowa

FROM:

EP&R/ENSV

TO:

Robert L. Morby

Chief, WMBR/ARWM

THRU:

William J. Keffer Chief, EP&R/ENSV

John C. Wicklund Director, ENSV

David A. Wagoner Director, ARWM

Attached for your information and use is a preliminary assessment for the Wellman Dynamics Company in Creston, Iowa. The report recommends a low priority for further investigation. Attachment

EPA-ARWM/WMBR

FEB 1) 1984

Region VII K.C., MO

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PREPARED BY: Ken Lawver

Environmental Engineer

Emergency Planning and Response Branch Environmental Services Division

SECTION I: INTRODUCTION

Section 103(c), public law 96-510 requires any person who has disposed of a hazardous substance, not subject to Subtitle C of the solid waste disposal act, to notify EPA of the amount and type of hazardous substance to be found there and any known, suspected or likely releases of such substances.

Land disposal facilities that contain hazardous wastes are to be investigated and evaluated as a part of EPA's nationwide waste management program. This preliminary investigation assesses each site according to its hazard potential and recommends a priority for a followup inspection of high, medium, low or none. The followup inspections or "full field investigations" are performed after the preliminary assessment and begin with sites having the highest hazard potential.

The objectives of the preliminary assessment are as follows:

- A. Obtain and review background information on each of the sites.
- B. To interview company and government officials and to perform an inspection of the sites without sampling (unless deemed necessary).
- C. To submit a formal report recommending whether these facilities should continue to be considered as potentially hazardous wastes sites, the seriousness of the possible hazards posed by the sites and the priority of future investigations to be made.

This preliminary assessment report is prepared as a result of a June 9, 1981, notification of hazardous wastes by Wellman Dynamics Corporation in Creston, Iowa.

The conclusions reached regarding the potential hazards posed by this site and recommendations on seriousness and priority of future investigations can be found in Section 7.

SECTION 2: HISTORY OF SITE

The Wellman Dynamics Corporation is located in Creston, Iowa, a small community with a population of 8,429 by the 1980 census. The plant in Creston was built in 1965 as an aluminum and magnesium foundry and provides castings primarily for the aerospace industry. Wellman Dynamics was initially owned by Hills McAnna, Chicago, Illinois, then was held by private industries and is presently owned by a British company called Custom Technologies.

The company employes approximately 300 people, but at the height of production has employed about 500 people. Casting production has reached 312 tons, but averages approximately 200 tons.

The Notification of Hazardous Waste EPA form 8900-1 was submitted by the company on June 9, 1981, listing the waste dump pit as a potential superfund site. The location of the waste dump pit is shown on the site sketch map, page A-3. Waste acids were placed in the pit between 1965 and 1971 and consisted of a mixture of hydraflouric, nitric, sulfuric and chromic acids. The acids are used to etch the castings.

Use of the waste pit for disposal of the spent acids was discontinued in 1971 because plant capacity had increased to where waste acids were close to exceeding the capacity of the waste pit and because of company concern about the disposal method. Waste acids were shipped to Conservation Chemical in Kansas City from 1971 to 1981.

SECTION 3: RECEPTORS

Wellman Dynamics Corporation lies to the southeast of the City of Creston. There are no residences within 1,000 feet of the site. The waste pit has concrete walls and is capped with a 6-inch concrete slab. No visible evidence of acid residue is apparent around the dump pit.

The drinking water source for the city of Creston is from Summit and Green Valley Lakes to the northwest. No known groundwater wells are present in the nearby area and there are no known critical environments that might be affected.

The Middle Platte River is approximately 1,000 feet to the south of the site and surface drainage from Wellman Dynamics would flow to the river.

SECTION 4: PATHWAYS

Most of the land surrounding Creston is used for agricultural purposes. The soil series in the vicinity of Wellman Dynamics and including the area around the waste dump pit is the Clarinda series.

The Clarinda series consists of poorly-drained soils and slopes are 5 to 14 percent.³ Clarinda soils have a very slow permeability and a high available water capacity.³ Permeability at depths below 7 inches is less than 0.06 in./hr. and the soils are silty clay and clay combination resulting in slow movement of liquids through it. Clarinda soils are used primarily for hay and pasture.³

Most parts of south-central Iowa have been chronically short of good-quality water. 4 Municipalities have experienced serious problems in obtaining potable supplies adequate to keep pace with their growth and development; industry has been hindered and continues to be hindered by the shortage of good quality water; and rural supplies for domestic and livestock use are difficult to obtain in many places. 4 Poor quality of groundwater in the Creston area resulted in the city using surface water from Summit and Green Valley Lakes for their drinking water supply. Two test wells (see A-2) dug by the city in 1934 did not yield sufficient water and were capped over. The major bedrock aquifers underlying of the region are the Missippian aquifer, the Devonian aquifer, and the Cambrian-Ordovician aquifer. 4 The three aquifers are approximately 1,250 feet, 1,750 feet and 2,900 feet below the surface in the Creston area.

SECTION 5: WASTE CHARACTERISTICS

The types of hazardous wastes reported by Wellman Dynamics Corporation are acids and heavy metals. The acids consisted of a mixture of hydraflouric, nitric, sulfuric and chromic acids. The heavy metal, chromium was contained in the chromic acid. Chromium would be considered highly toxic and persistent. It is moderately soluble in water and chromium oxide is a known carcinogen and bioaccumulate.

The company estimates that 10,000 gallons of acid wastes were disposed of in the waste dump pit between 1965 and 1971. Since the spent acid solutions were placed in the waste pit in a combined form no representative estimate individual amounts per acid type could be made. No tests were performed on the spent solutions, therefore, concentration levels are also unknown.

SECTION 6: WASTE MANAGEMENT PRACTICES

When use of the pit was discontinued in 1971, it was filled with sand and capped over with concrete.

The waste dump pit has approximately 6-inch concrete walls and the cap is a 6-inch concrete slab. It is assumed that all the acid material has leached through the limestone rocks at the bottom of the pit. There is no evidence of contamination on the surface near the concrete slab.

No liners, leachate collection system, gas collection system or containers were used to dispose of the acids.

SECTION 7: COMMENTS AND RECOMMENDATIONS

It is expected that all acid material placed in the pit has leached into the soil. Except for a possible perched water table, the Missippian aquifer would be closest to the surface and it would be approximately 1,250 feet deep at Creston. Two test wells by the city of Creston each penetrated the Pennsylvanian confining bed.² One well in Sec. 11, T72N, R31W reached the Pennsylvanian at 162 feet and reported no water except for small deposits in the alluvian at 10 feet to 20 feet depths. The other test well in Sec. 6, T72N, R30W reported no water. The test wells were both completed in 1934 and were capped over and abandoned.

The recommended priority for this site is a low priority for future investigation (see A-4).

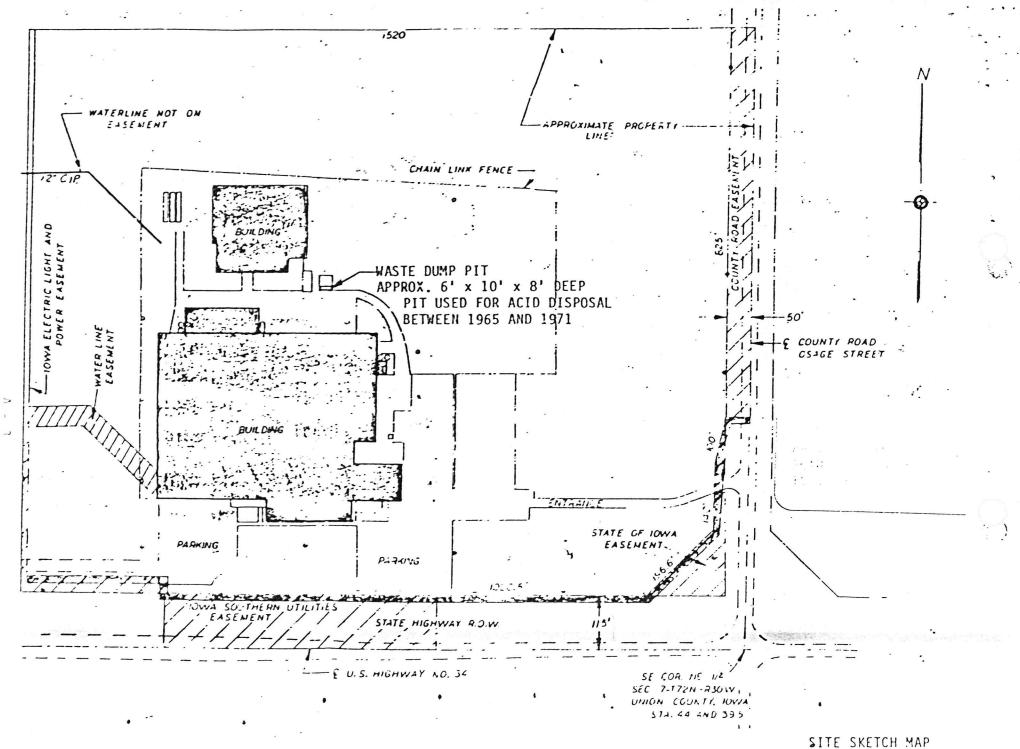
SECTION 8: REFERENCES

- 1. Creston West (1981), Creston East (1980) Quandrangle 7.5 minute series topographic map, U.S. Geologic Survey, Rolla, Missouri.
- List of water wells supplied by Iowa Geological Survey, Iowa City, Iowa, 1983.
- 3. Soil Survey of Union County, Iowa, John R. Nixon and Louis E. Boeckman, U.S. Department of Agriculture, Soil Conservation Service in cooperation with the Iowa Agricultural Experiment Station, State of Iowa, 1978.
- 4. The Water Resources of South-Central Iowa, Joseph W. Cagle and A. J. Heinitz, U.S. Geological Survey, Iowa, 1978, in cooperation with the Iowa Geological Survey.

APPENDIX

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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

OLSTATE 02 SITE NUMBER

I.A. I.A. D. D. G. S. D. S. D

PART	1 - SITE INFORMA	TION AND	ASSESSME	ENT	IV	AD065218737
II. SITE NAME AND LOCATION					******	
O1 SITE NAME (Layer, common, or descriptive name of see)		02 STREET, P	OUTE NO., OR	SPECIFIC LOCATION	DENTIFIER	
MELLWAN DYNAMICS		P. 0.	Box 14	17, U.S.F	Route 3	4
CRESTON		IA 508	ZIP CODE C	Union		07 COUNTY 08 CONG COO€ DIST 88 5
09 COORDINATES LATITUDE LO	NGITUDE		······································			
10 DIRECTIONS TO SITE (Starting from nearest public rood)		1				
III. RESPONSIBLE PARTIES		2 2				
01 OWNER IS STOWN		·				
Customs Technologies (James Howarth)			remost, making, no			
OJ CITY	owarth)	P. 0.	Box 14	7, U.S.R	loute 3	1
		04 STATE 05	ZIP CODE	06 TELEPHONE	NUMBER	
: Creston		IA 508	01	515 782	-8521	Ext. 282
07 OPERATOR (# trig on and different from eumer)		DE STREET IA	remest, meeting, re-	extension)	- 0321	LXU. 202
James Lauer		PΩ	Box 14	7 11 6	D	
O9 CITY		10 STATE 11	21B COOF	7, U.S.	Route .	34
Creston			0801	1515 782		
13 TYPE OF OWNERSHIP (Check ene)						
XXA. PRIVATE D B. FEDERAL:	' (Agency neme)	-	C. STATE	DD.COUNTY	D E. MUI	NICIPAL.
□ F. OTHER:			G. UNKK	OWN		
14 OWNER-OPERATOR NOTIFICATION ON FILE (CASE) of the month						
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THE THE TENER TON OF POTENTIAL HAZARD						
CYES DATE 12 /13/83 MA.	EPA DB. EPA LOCAL HEALTH OFFI	CONTRACTO	OTHER:			CONTRACTOR
CONT	TRACTOR NAME(S): _				Successi	
02 SITE STATUS (Creek ene)	03 YEARS OF OPERA					
DI A. ACTIVE XX B. INACTIVE DIG. UNKNOWN 04 DESCRIPTION OF BUBSTANCES POSSIBLY PRESENT, KNOWN		965 EGIMNING YEAR	1971 ENDING T		UNKNOWN	
OF DESCRIPTION OF BOBS TANCES POSSIBLY PRESENT, KNOWN	, OH ALLEGED					
combination of three acids - H		, Nitrio	:, Sulfu	uric, and	Chromic	
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND	OF POPULATION				****	
Potential contamination of soi acid plume in soil.	l and detrin	mental a	imounts	of chromi	um resi	due in
V. PRIORITY ASSESSMENT		-				
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VI. INFORMATION AVAILABLE FROM	(Propoct on time a	water/a base/	D. NONE	or action needed company	turneri dispositi	on form)
OI CONTACT	Today					
James Lauer	Wellman		s Compa	ny	1	519782-8521
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	DO ORGANIZA		OT TELEPHONE		08 DATE
Ken Lawver	EPA	EP&R B		913-236-		12/13/83

EPA FORM 2070-12 (7-81)

SEPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

L MENTIFICATION

O' SIA'E OZ SITE NUMBER IA IADO65218737

HAZARDOUS CONDITIONS AND INCIDENTS				
01 🖄 A. GROUNDWATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED.	02 D OBSERVED (DATE)	XD POTENTIAL	D ALLEGED
3 POPULATION POTENTIALLY AFFECTED.	04 NARRATIVE DESCRIPTION			
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01 D.C. CONTAMINATION OF AIR 03 POPULATION POTENTIALLY AFFECTED.	02 D OBSERVED (DATE)	D POTENTIAL	C ALLEGED
DI D FIRE/EXPLOSIVE CONDITIONS DO POPULATION POTENTIALLY AFFECTED	02 - OBSERVED (DATE)	D POTENTIAL	O ALLEGED
01 DE DRECT CONTACT	02 OBSERVED (DATE			55050
03 POPULATION POTENTIALLY AFFECTED	04 NARRATIVE DESCRIPTION	**************************************	D POTENTIAL	U ALLEGED
03 POPULATION POTENTIALLY AFFECTED	02 - OBSERVED (DATE	•		
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OIX F CONTAMINATION OF SOIL OJ AREA POTENTIALLY AFFECTED Acid plume has probably c	02 DOBSERVED (DATE	he pit	& POTENTIAL bottom	□ ALLEGED
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O1 C G DRINKING WATER CONTAMINATION O3 POPULATION POTENTIALLY AFFECTED. O1 C H WORKER EXPOSURE/NJURY O3 WORKERS POTENTIALLY AFFECTED:	O2 DOBSERVED (DATE	he pit	© POTENTIAL D POTENTIAL	☐ ALLEGED

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POTENTIAL HAZARDOUS WASTE SITE

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PSD	PESTICIDES						
OCC	OTHER ORGANIC C	HEMICALS					
юс	INORGANIC CHEMI						,
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ACD	Hydroflouric		7664-39-3	dumped in		unkown	
ACD	Nitric		7697-37-2	dumped in		unkown	
ACU	Chromic		7738-94-5	dumped in		unkown	

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FDS				FDS			
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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

I. IDENTIFICATION
OF STATE OF SITE NUMBER
I.A. II. AD065218737

HAZARDOUS CONDITIONS AND INCIDENTS (CONTINUED)			
D1 C J. DAMAGE TO FLORA D4 NARRATIVE DESCRIPTION	02 OBSERVED (DATE:)	D POTENTIAL	D ALLEGED
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1 L CONTAMINATION OF FOOD CHAIN	02 D OBSERVED (DATE:)	D POTENTIAL	☐ ALLEGED
4 NARRATIVE DESCRIPTION			
1 D M. UNSTABLE CONTAINMENT OF WASTES	02 OBSERVED (DATE:)	D POTENTIAL	☐ ALLEGED
(Soft: nurof/starding louds feating druns) 3 POPULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION	3	
1 D N. DAMAGE TO OFFSITE PROPERTY A NARRATIVE DESCRIPTION	02 OBSERVED (DATE:)	D POTENTIAL	[] ALLEGED
01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTP3 14 NARRATIVE DESCRIPTION	02 OBSERVED (DATE:)	O POTENTIAL	☐ ALLEGED
11 D P. ILLEGAL/UNAUTHORIZED DUMPING 4 NARRATIVE DESCRIPTION	02 D OBSERVED (DATE:)	O POTENTIAL	□ ALLEGED
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SOURCES OF INFORMATION ICES MINERAL INFORMATION ICES MANAGEMENT	semple analysis reports)		

SEPA

SITE INSPECTION REPORT

REGION	SITE NUMBER (10 be	assign-
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IAD 065218737

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Er./ironmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force (EN-335); 401 M St., SW; Washir vion, DC 20460.

I. SITE IDE	TIFICATION	
A. SITE NAME	B. STREET (or other Identifier)	1.52.00
C. CITY Dynamics		
Creston	D. STATE E. ZIP CODE	F. COUNTY NAME
G. SITE OPERATOR INFORMATION	1 1 150801	Union
1. NAME	Ē	2. TELEPHONE NUMBER
James Lauer		515-122-8521
H. REALTY OWNER THEORYATION (II WILLOWING LOUR OPERALLY OF SILE)	-o ^	IA 30801
1. NAME	9	2. TELEPHONE NUMBER 222
Custom & Technologies_		315-782-8521
Crestan		4. STATE 6. ZIP COOE
Of Chromium residue in Dumin	or of soil and	detrimental amounts
J. TYPE OF OWNERSHIP	Soil	
1. FEDERAL . 2. STATE . 3. COUNTY	4. MUNICIPAL S. PRIVA	TE
II. TENTATIVE CISPOSITIO	N (complete this section lest)	1
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[] т. ная		NONE
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Then South Pressessment		2-16-84
	INFORMATION	70.7
A. PRINCIPAL INSPECTOR INFORMATION 1. NAME	2. TITLE	1
Ken La WILER		
EPA EPER		4. TELEPHONE PO. (eres code & no.)
B. INSPECTION PARTICIPANTS		9/3-236-3838
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C. SITE PEPRESENTATIVES INTERVIEWED (comparate officials, works		
C. SITE DEPRESENTATIVES INTERVIEWED (conforme officials, works 1. NAME 2. TITLE A TELEPHONE NO		ADDRESS
		ADDRESS

1006: 210121 Subject: Review of the Belining Assistant - for the Wellmin Synamics Site, Creston IA Summary of Report Notification; CERCLA 103(c) on 6/9/8/ Ownership; Built stoy in 1965 and owned by Wille Me Anow, then held by private industries and now owned by Custom Technology History and Problem; Acids consisting of hydra-flowing, nitric, sulfanic, and Monia acids were disposed of in a 6 x10'x 8 deep pit made of concrete from 1965 to 1971. Total amount desposed is estimated to be about 10,000 gallons. No individual amounts per acid trype is known The pit has Acid has linded through the linestone surface contamination is present. No lenown groundwater welle are in the menty was at are no known extract - environment · Eccommendations: acide desposed and their justicular with

for migration should be performed.

Report Reviewed and Approved by: Pete Culver Signature: Peta 19/14/93

Site Decision Pete Culver Signature: Peta 19/14/93

Made by: Pete Culver Signature: Peta 19/14/93

EPA Form # 9100-3

I NDE45218737

16-14-93